

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:** Please amend the claims as follows:

We claim:

**Claims 1.-73. (Cancelled)**

**Claim 74. (Previously Presented)** A recognition molecule comprising an amino acid sequence which contains

- (i) the amino acid sequence SEQ ID NO. 1 and
  - (ii) the amino acid sequence SEQ ID NO. 2 or 3 and
  - (iii) the amino acid sequence SEQ ID NO. 4, 5 or 6,
- and specifically binds the core 1 antigen.

**Claim 75. (Previously Presented)** The recognition molecule according to claim 74, further comprising an amino acid sequence which contains

- (i) the amino acid sequence SEQ ID NO. 7 or 8 or 9 and
  - (ii) the amino acid sequence SEQ ID NO. 10 or 11 and
  - (iii) the amino acid sequence SEQ ID NO. 12 or 13,
- and specifically binds the core 1 antigen.

**Claim 76. (Currently Amended)** The recognition molecule according to claim 74, wherein the antibody framework sequences

- a) FRH1, ~~FRH2~~, FRH3 and FRH4 for the variable heavy chain VH (SEQ ID NO: 151) are the following amino acid sequences, the amino acid position corresponding to the numbering according to Kabat:

for FRH1 inposition ( <u>SEQ ID NO: 143</u> )	1	Q or E
	2	V
	3	Q, K or T
	4	L
	5	K or V
	6	E or Q
	7	S
	8	G
	9	A
	10	E

11	L or V
12	V or K
13	R or K
14	P
15	G
16	T or A
17	S
18	V
19	K
20	I or V
21	S or P
22	C
23	K
24	A, V, S or T
25	S
26	G
27	Y, F, S or D
28	T
29	F, L or

I

for FRH2 in position (SEQ ID NO: 144)

30	T
36	W
37	V
38	K or R
39	Q
40	R or A
41	P
42	G
43	H or Q
44	G
45	L
46	E
47	W or R
48	I or M
49	G
66	K or R

for FRH3 in position (SEQ ID NO: 145)

67	A or V
68	T
69	L or M
70	T
71	A, L or T
72	D
73	T
74	S
75	S or T
76	S
77	T
78	A
79	Y
80	M
81	Q or E
82	L
82a	S
82b	S or R
82c	L
83	T or R
84	S
85	E
86	D
87	S or T
88	A
89	V
90	Y
91	F or y
92	C
93	A
94	Y, K or R
103	W
104	G
105	Q
106	G
107	T

for FRH4 in position (SEQ ID NO: 146)

108	T, S or L
109	V or L
110	T
111	V
112	S
113	S or A

b) FRL1, FRL2, FRL3 and FRL4 for the variable light chain VT (SEQ ID NO: 152), are the following amino acid sequences, the amino acid position corresponding to the numbering according to Kabat:

for FRL1 in position (SEQ ID NO: 147)

1	D
2	I, V or L
3	Q or L
4	M
5	T
6	Q
7	T or S
8	P
9	L
10	S
11	L
12	P
13	V
14	S or T
15	L or P
16	G
17	D or E
18	Q or P
19	A
20	S
21	I
22	S
23	C

for FRL2 in position (SEQ ID NO: 148)

35	W
36	Y
37	L

38	Q
39	K
40	P
41	G
42	Q
43	S
44	P
45	K or Q
46	L
47	L
48	I or V
49	Y

for FRL3 in position (SEQ ID NO: 149)

57	G
58	V
59	P
60	D
61	R
62	F
63	S
64	G
65	S
66	G
67	S
68	G
69	T
70	D
71	F
72	T
73	L
74	K
75	I
76	S
77	R
78	V

79	E
80	A
81	E
82	D
83	L or V
84	G
85	V
86	Y
87	Y
88	C

for FRL4 in position (SEQ ID NO: 150)

98	F
99	G
100	G or Q
101	G
102	T
103	K
104	L
105	E
106	I or L
106a	K
107	R
108	A.

**Claim 77. (Previously Presented)** The recognition molecule according to claim 74, wherein the recognition molecule comprises a combination of sequences SEQ ID Nos. 46 and 80, or SEQ ID Nos. 47 and 81, or SEQ ID Nos. 48 and 80, or SEQ ID Nos. 50 and 80, or SEQ ID Nos. 53 and 82, or SEQ ID Nos. 52 and 83, or SEQ ID Nos. 55 and 83, or SEQ ID Nos. 54 and 80, or SEQ ID Nos. 51 and 83, or SEQ ID Nos. 49 and 80, or SEQ ID Nos. 56 and 90, or SEQ ID Nos. 57 and 90, or SEQ ID Nos. 57 and 86, or SEQ ID Nos. 58 and 87, or SEQ ID Nos. 56 and 91, or SEQ ID Nos. 59 and 91, or SEQ ID Nos. 60 and 87, or SEQ ID Nos. 61 and 90, or SEQ ID Nos. 56 and 88, or SEQ ID Nos. 56 and 85, or SEQ ID Nos. 59 and 90, or SEQ ID Nos. 62 and 90, or SEQ ID Nos. 59 and 86, or SEQ ID Nos. 74 and 92, or SEQ ID Nos. 63 and 87, or SEQ ID Nos. 74 and 87, or SEQ ID Nos. 74 and 89, or SEQ ID Nos. 74 and 85, or SEQ ID Nos. 64 and 86, or SEQ ID Nos. 74 and 86, or SEQ ID Nos. 63 and 86, or SEQ ID Nos. 65 and 85, or SEQ ID Nos. 65 and 86, or SEQ ID Nos. 66 and 85, or SEQ ID Nos. 67 and 87, or SEQ ID

Nos. 68 and 86, or SEQ ID Nos. 72 and 88, or SEQ ID Nos. 69 and 90, or SEQ ID Nos. 70 and 90, or SEQ ID Nos. 69 and 92, or SEQ ID Nos. 73 and 86, or SEQ ID Nos. 69 and 89, or SEQ ID Nos. 71 and 92, or SEQ ID Nos. 56 and 86, or SEQ ID Nos. 65 and 92.

**Claim 78. (Previously Presented)** The recognition molecule according to claim 74, wherein said recognition molecule is a single-chain antibody fragment, a multibody, a Fab fragment, a fusion protein of an antibody fragment with peptides or proteins and/or an immunoglobulin of the IgG, IgM, IgA, IgE, IgD isotypes and/or subclasses thereof.

**Claim 79. (Previously Presented)** A construct comprising the recognition molecules according to claim 74, wherein the recognition molecules are fused, chemically coupled, covalently or non-covalently associated with (i) immunoglobulin domains of various species, (ii) enzyme molecules, (iii) interaction domains, (iv) domains for stabilization, (v) signal sequences, (vi) fluorescent dyes, (vii) toxins, (viii) catalytic antibodies, (ix) one or more antibodies or antibody fragments with different specificity, (x) cytolytic components, (xi) immunomodulators, (xii) immunoeffectors, (xiii) MHC class I or class II antigens, (xiv) chelating agents for radioactive labelling, (xv) radioisotopes, (xvi) liposomes, (xvii) transmembrane domains, (xviii) viruses and/or (xix) cells.

**Claim 80. (Previously Presented)** A method for the production of recognition molecules according to claim 74, comprising:

- (i) incorporating, in a virus or in a host cell, at least one polynucleotide which encodes the polypeptide sequence of at least one recognition molecule, wherein said polypeptide sequence comprises
  - (a) the amino acid sequence SEQ ID NO. 1 and
  - (b) the amino acid sequence SEQ ID NO. 2 or 3 and
  - (c) the amino acid sequence SEQ ID NO. 4, 5 or 6,
- (ii) culturing the host cells or the virus under suitable conditions; and
- (iii) obtaining the recognition molecule, the effector cell bearing the recognition molecule, or the virus specifically recognizing a core 1 antigen.

**Claim 81. (Previously Presented)** A method for the prophylaxis, prevention, diagnosis, reduction, therapy, follow-up or aftercare of a tumor disease or a metastasis, comprising administering to a subject in need thereof, a recognition molecule according to claim 74.

**Claim 82. (Previously Presented)** The method according to claim 81, wherein the recognition molecule is a non-labelled recognition molecule, which comprises an IgM or IgG or has been

derived therefrom.

**Claim 83. (Previously Presented)** The method according to claim 81, wherein the recognition molecule is a multibody.

**Claim 84. (Previously Presented)** A method for the prophylaxis, prevention, diagnosis, reduction, therapy, follow-up or aftercare of a tumor disease or a metastasis, comprising administering to a subject in need thereof, a construct according to claim 79.